





















## PRACTICAL -8

**Aim: - Raspberry pi basic programming.**

### Raspberry pi 3 GPIO Header

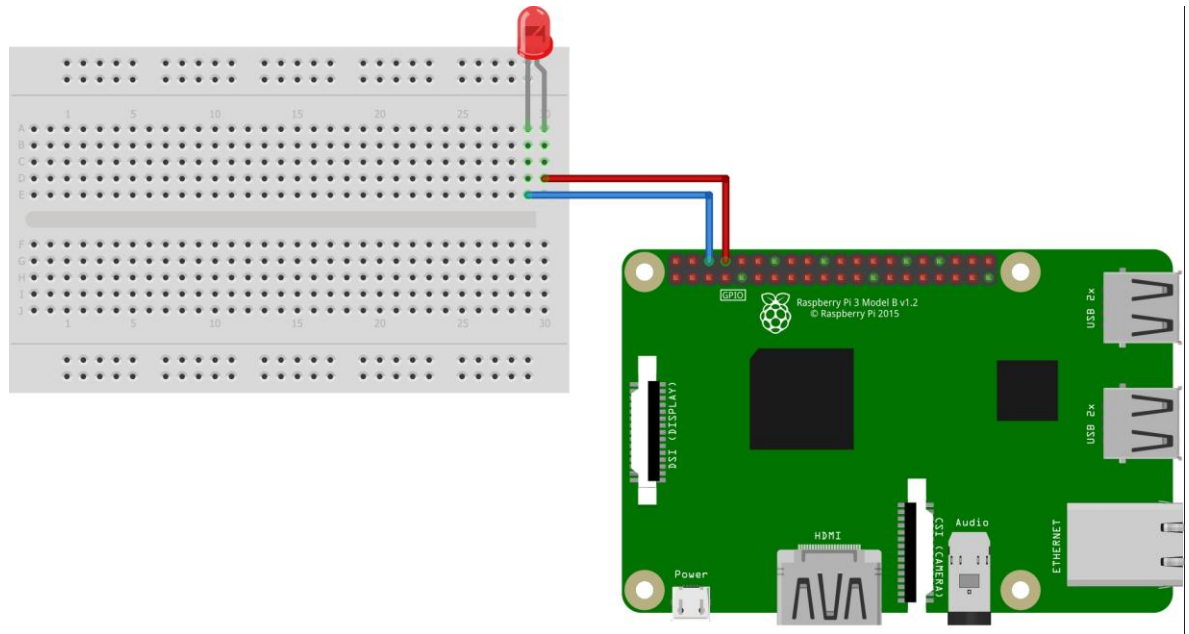
Pin#	NAME		NAME	Pin#
01	3.3v DC Power		DC Power 5v	02
03	GPIO02 (SDA1 , I <sup>2</sup> C)		DC Power 5v	04
05	GPIO03 (SCL1 , I <sup>2</sup> C)		Ground	06
07	GPIO04 (GPIO_GCLK)		(TXD0) GPIO14	08
09	Ground		(RXD0) GPIO15	10
11	GPIO17 (GPIO_GEN0)		(GPIO_GEN1) GPIO18	12
13	GPIO27 (GPIO_GEN2)		Ground	14
15	GPIO22 (GPIO_GEN3)		(GPIO_GEN4) GPIO23	16
17	3.3v DC Power		(GPIO_GEN5) GPIO24	18
19	GPIO10 (SPI_MOSI)		Ground	20
21	GPIO09 (SPI_MISO)		(GPIO_GEN6) GPIO25	22
23	GPIO11 (SPI_CLK)		(SPI_CE0_N) GPIO08	24
25	Ground		(SPI_CE1_N) GPIO07	26
27	ID_SD (I <sup>2</sup> C ID EEPROM)		(I <sup>2</sup> C ID EEPROM) ID_SC	28
29	GPIO05		Ground	30
31	GPIO06		GPIO12	32
33	GPIO13		Ground	34
35	GPIO19		GPIO16	36
37	GPIO26		GPIO20	38
39	Ground		GPIO21	40

### Experiments

1. LED ON
2. LED Blinking
3. Increase and decrease the brightness of LED

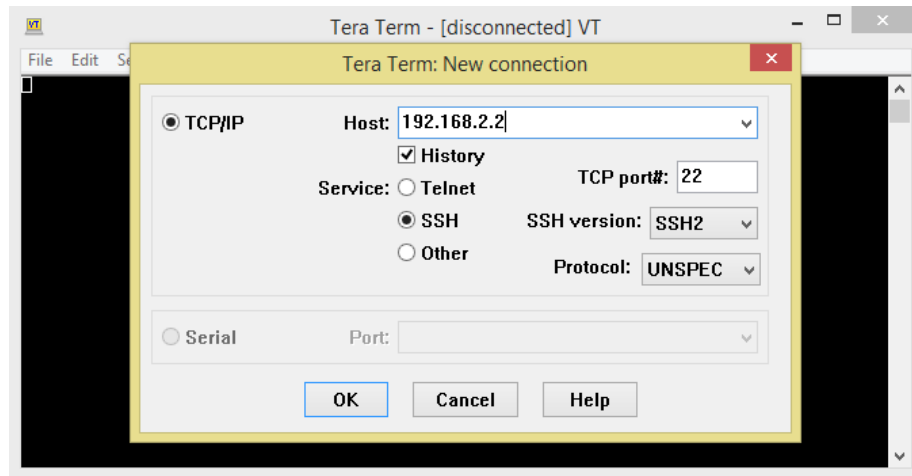
## **Connection for Experiment**

### **1. For ALL experiment**



## **CREATING AN SSH CONNECTION WITH THE RASPBERRY PI**

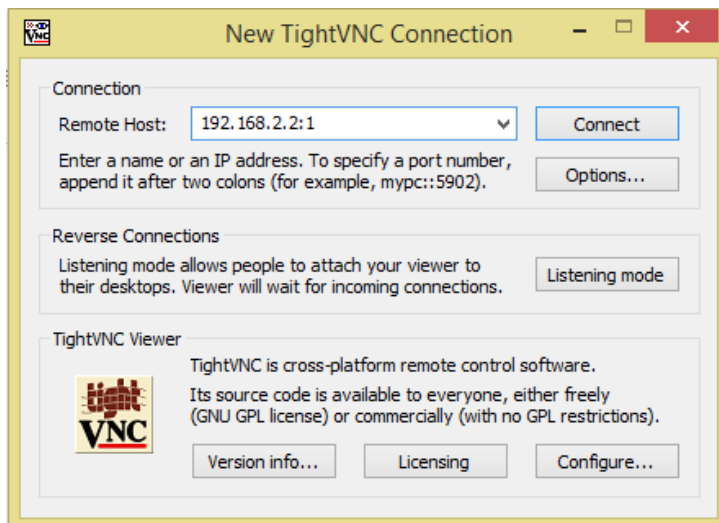
1. Install TeraTerm
2. Click File --> New connection,
3. Select TCI/IP Connection
4. Then type in your Raspberry Pi's IP



5. Click OK with the default settings
6. Click Continue for the Security Key Question
7. Enter the Username as **pi**
8. Enter the Password as **raspberrypi**
9. Click OK to login in to the Raspberry Pi SHELL

## CREATING A VNC CONNECTION WITH THE RASPBERRY PI

1. Install TightVNC viewer in your system



2. Open your TightVNC Viewer
3. Type in the IP of your raspberry Pi followed by the Display Number
4. The default display Number is 1
5. Click Connect with the Default settings
6. When asked for password enter the default password "**password**"
7. It would open a VNC connection with the raspberry Pi

8. The Raspberry Pi is installed with Raspbian OS and the default desktop environment is PIXEL